"Express Mail" mailing label number EL 756 224 312 US

Date of Deposit: August 7, 2001

Our Case No.5658/749

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION FOR UNITED STATES LETTERS PATENT

INVENTOR: GAYLE HARGRAVE-THOMAS

TITLE: SAW BLADE PACKAGE AND CARRY CASE

ATTORNEY: ANASTASIA HEFFNER
BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200

09904609 - 080701

SAW BLADE PACKAGE AND CARRY CASE

BACKGROUND

When purchasing circular saw blades, a person will often decide to purchase more than one. This may be due to having a large amount of work for which to put the blades to use, or because the user desires to have additional blades on hand in the event they are needed. Moreover, it is usually more economical to buy a package or group of several blades rather than purchasing them individually. When a user decides to purchase or transport multiple blades, he may have to handle them individually. Handling numerous, loose blades may be awkward, increases the chance of injury due to the sharp teeth on each blade, and may also cause the blades to forcefully contact each other, resulting in chipping and other types of damage to the blades.

Attempts have been made to alleviate this problem. One way has been to provide simple, box-like carry cases for retaining saw blades. However, these cases often allow the saw blades to move freely within the case, thereby causing the blade teeth to be damaged, rendering the saw blades unusable. Additionally, these cases often are manufactured to retain a fixed number of blades, and cannot be adjusted to accommodate a lesser or greater number of blades. When a small number of blades are retained within this type of carry case, this may cause the blades to rattle against each other and incur damage. Alternatively, these types of carry cases may not be able to accommodate large numbers of blades.

Moreover, a user or potential purchaser may be unable to view the quality of the saw blades or touch them if they are enclosed within a case on display. Hence, if the saw blades are of poor quality they may cause damage to property or cause injury. These carry cases may also require a large amount of material in order to be manufactured, thereby rendering the cases expensive.

Document: 2005-0804

BRIEF SUMMARY

To alleviate the disadvantages of the prior art, a saw blade package and carry case is provided herein. The case includes a front member having at least one crossbar extending across the front member and a rear member having at least one crossbar extending across the rear member. A spindle extends between the front and rear members and is removably received by a receptacle on at least one of the front and rear members. At least one handle is attached to one of the front and rear members. The front and rear members together form a frame body, and are each larger than the diameter of at least one circular saw blade to be placed within the saw blade carry case and to be retained by the spindle. The carry case may be adjusted so that the spindle may accommodate a varying number of blades.

In another embodiment of the invention, the saw blade carry case comprises a wire frame that includes a front circular member having an upper crossbar and a central crossbar and a rear circular member having an upper crossbar and a central crossbar. A panel suitable for displaying an advertisement is attached with a lower portion of either the front and rear members. A threaded spindle is also included, and has a first end attached to either of the front and rear members and a second end to removably receive the other of the front and rear members. The spindle extends through the center of the members. A threaded receptacle is located on either of the front and rear members to receive the second end of the spindle. A handle is attached to either of the front and rear members, and together the front and rear members form a frame body and are parallel.

Another embodiment of the invention provides a package and display for holding a plurality of saw blades. The package and display includes a pair of frame members having one or more openings. The pair of frame members defines a gap therebetween for sandwiching the saw

blades and retaining the saw blades. The opening and the gap allow a purchaser to view and touch an edge of the saw blades and at least a portion or one side of one of the blades while the blades are retained in the package and display.

According to another embodiment of the invention, the package and display includes a pair of generally flat frame members arranged generally parallel to each other to define a gap therebetween. A handle is located on at least one of the frame members and retention means are located on at least one of the frame members. The frame members and the retention means cooperate to hold the blades within the gap.

Another embodiment of the invention includes a saw blade carry case having a front member with at least one crossbar extending over its substantial center and a rear member having at least one cross bar extending over its substantial center. There are at least two flanges, each attached to the perimeter of the front and rear members, and a threaded fastener removably and adjustably affixes the flanges to the front and rear members. A handle is attached with one of the front and rear members. The front and rear members together form a frame body and are each larger than the diameter of at least one saw blade placed within the saw blade carry case and retained by the flanges and fasteners. The carry case may be adjusted so that the carry case may accommodate a varying number of blades.

The invention provides a saw blade package and carry case that can adjustably retain a varying number of saw blades, allowing for safe and convenient handling, transport and storage of the blades. The saw blade package and carry case also allows users and purchasers to inspect and touch saw blades retained within the case. The foregoing and other features and advantages of the invention will become further apparent from the following detailed description of the presently preferred embodiments, read in conjunction with the accompanying drawings.

09245907.080704

BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWINGS

FIG. 1 is a front plan view of an embodiment of the saw blade package and carry case;

FIG. 2 is a rear perspective view of the saw blade package and carry case of FIG. 1;

FIG. 3 is a side view of the saw blade package and carry case of FIG. 1;

FIG. 4 is a front perspective view of the saw blade package and carry case of FIG. 1 holding ten saw blades;

FIG. 5 is a front perspective view of the saw blade package and carry case of FIG. 1 holding a number of saw blades that is greater then ten; and

FIG. 6 is a front perspective view of an alternate embodiment of the saw blade package and carry case showing a covering around the perimeter of the carry case.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

A saw blade package and carry case for retaining saw blades for circular saws and similar tool blades is provided herein. An embodiment of the package and carry case 2 is shown in FIGS. 1 and 2. In a preferred embodiment, the package and carry case 2 is a wire frame constructed from 6-gauge steel wire. The wire is coated, preferably with a paint or plastic material, in order to resist corrosion and other types of damage to the wire. Note that in other embodiments a stainless steel or other corrosion-resistant material may be used to form the package and carry case, thereby eliminating the need for coating the wire. The package and carry case 2 includes a front member 4 and a rear member 6. Preferably, the front and rear members 4, 6 are each circularly shaped and are

substantially of the same size. The front and rear members 4, 6 each has at least one cross bar 10a, 10b, respectively, extending across its substantial center. Preferably, however, the rear member 6 also has upper and lower crossbars 9, 11, and the front member 4 also preferably includes a panel 8 and an upper crossbar 13, although the number of crossbars on the front and rear members 4, 6 may each be varied in other embodiments for purposes of improved stability or visibility. The panel 8 is suitable for retaining an advertisement, and preferably covers less than one-half of the front member 4. However, in other embodiments, the panel may cover more than one-half of the front member or may cover the entire front member.

The central crossbar 10a on the front member 4 preferably includes a pair of handle receptacles 12 that preferably are each tack-welded to and located an equal distance from the midpoint of the central crossbar 10a. The handle receptacles each receive an end 14 of a handle member 16. The handle member 16 preferably is metal wire of the same type as the wire frame of the package and carry case 2 described above, formed in the shape of the handle member 16 as shown. Preferably, the handle member 16 fits loosely within the handle receptacles 12 so that the handle member 16 is pivotable relative to the central crossbar 10a.

Referring to FIGS. 2 and 3, a spindle receptacle 18 is located below and approximately at the midpoint of the central crossbar 10a and protrudes inwardly from the front member 4 towards the rear member 6. The spindle receptacle 18 receives a central spindle 20 that extends between the members 4, 6. The spindle has a head 21 that is welded to the central crossbar 10b of the rear member 6, and an end 23 that protrudes through an opening (not shown) in the spindle receptacle 18, outwardly from the front member 4 (shown in FIG. 4). A fastener 24, such as a nut, is attached to the portion of the spindle 20 that protrudes from the opening 26 and keeps the spindle 20 in place. Preferably, the spindle 20 and spindle receptacle 18 are each threaded, allowing the rear member 6

Doc No. 4,805,764

to be attached to the front member 4 via the spindle 20. As will be discussed further below, the position of the front member 4 may be adjusted to different widths relative to the rear member 6 along the spindle 20.

Note that in other embodiments the orientation of the spindle and spindle receptacle may be reversed. The head may be welded to the central crossbar of the front member, and the spindle receptacle may be attached to the central cross bar of the rear member. Moreover, the spindle receptacle may be located above the central crossbar. Although the preferred embodiment of the package and carry case includes a threaded spindle, such as a screw, and a threaded spindle receptacle, in other embodiments other configurations for attachment may be used. By way of example, an unthreaded receptacle may receive an unthreaded spindle. A fastener such as a cotter pin can then retain the unthreaded spindle in place by passing through aligned openings in the receptacle and spindle. In such a configuration, to allow for the adjustability described above, the fastener may be attached at various positions along the spindle.

Moreover, configurations other than a centrally located spindle and fastener may also be used without departing from the scope of the present invention. For example, a telescoping rod attached to the central crossbar of either the front or rear member may be used in conjunction with at least two fasteners that are each attached to the perimeter of the front and rear members. Alternatively, a centrally located rod or spindle may be eliminated. For example, at least two flanges may each be attached to the perimeter of the front and rear members. Fasteners can pass through each of the flanges, thus allowing the package and carry case to be adjusted to different widths in order to accommodate differing numbers of saw blades. In yet an alternate embodiment, either or both of the front and rear members may have a recess formed into an inner side of the member in order to receive and retain the blades. At least one fastener may then attach the members to each other.

As shown in FIGS. 4 and 5, the spindle 20 retains saw blades 28 within the package and carry case 2. In a preferred embodiment, shown in FIG. 4, the package and carry case 2 retains ten saw blades 28. However, in other embodiments, and because the package and carry case may be adjusted to different widths, the number of saws blades 28 retained by the spindle 20 may be greater than or less than ten blades. By way of example, FIG. 5 shows the saw blade package and carry case 2 retaining more than ten saw blades 28.

The diameter of the front and rear members 4, 6 preferably exceeds the diameter of the saw blades 28 so that teeth 30 on the saw blades do not protrude beyond the circumference of the front and rear members 4, 6, thereby preventing possible injury to a person handling the package and carry case 2 and preventing damage to the blade edges. In an alternate embodiment, in addition to having the diameter of the package and carry case larger than the diameter of the saw blades, a covering 32 may be placed around the circumference of the package and carry case 2. FIG. 6 shows a covering 32 having a width at least as wide as the distance between the front and rear members 4, 6. Preferably, the covering 32 is made of a material of sufficient durability so that the teeth 30 do not cut through the covering. Examples of suitable materials include, but are not limited to, plastics, elastomeric materials, or a thick band. Note that in further alternate embodiments the covering may be sized so that it does not contact the front and rear members

Preferably, the package and carry case will be available for purchase in retail establishments with saw blades retained therein, although the package and carry case may also be available for purchase without saw blades. Alternatively, the package and carry case may be utilized as a display, with saw blades being removed for individual purchase or usage. In an additional embodiment, the package and carry case may include dividers placed between the blades in order to provide additional protection to the teeth of the blades. The dividers may be

Sub B4

incorporated into the package and carry case via the configurations described above (i.e., a spindle, flanges, etc.). Preferably, the dividers are round, corrugated pieces of cardboard that are placed between the blades so that the teeth of the blades do not contact each other, although in other embodiments the dividers may be made of other materials, such as plastics, and may be otherwise shaped.

In a preferred embodiment, the saw blades are removed from the package and carry case by removing the fastener from the spindle, and then the front member from the spindle. The saw blades may then be removed from the spindle via arbor holes in the blades. Likewise, to place saw blades back within the package and carry case, the saw blades are placed over the spindle via the arbor holes, the front member is placed over the spindle, and the fastener then secures the spindle in place. Thus, the package and carry case is reusable.

The advantages of the saw blade package and carry case are numerous. A package and carry case is provided that may retain numerous saw blades, and yet a user may still view the blades, unlike package and carry cases that fully enclose saw blades. This is useful to a potential purchaser, who can safely view a product for purchase, and can inspect the blade teeth from numerous angles, i.e., from the top, bottom and sides. Moreover, in embodiments that do not include a covering, a potential purchaser may even touch the edges of the blades to assure himself about the quality of the blades he is contemplating purchasing.

The case is also beneficial in that a user may easily inspect the quality of his blades (e.g., inspecting saw blades for fracture or worn teeth), and can thereby replace the blade before damage to property or injury is incurred. Additionally, since the package and carry case is adjustable to accommodate differing numbers of blades, it may be adjusted so that the blades are securely sandwiched in place by the members. They will not rattle against each other, thereby avoiding scratches or other damage to the blades. Moreover, the unique, frame-like

structure also will require a lesser amount of materials to be used during manufacturing than a solid case, and will therefore be less expensive to manufacture.

Alternate embodiments are also possible without departing from the scope of the present invention. For example, either or both the panel and the handle member may be placed on the rear member of the package and carry case. Furthermore, although the preferred embodiment includes circularly-shaped front and rear members, in other embodiments the front and rear members may be shaped differently, such as, by way of example, square-shaped, hexagonally shaped, etc. In addition, other materials may be used to manufacture the package and carry case. Examples of other suitable materials include, but are not limited to, other metals or heavy plastics.

Moreover, although the package and carry case has been described in conjunction with circular saw blades, one skilled in the art will recognize that the package and carry case is suitable for use with a variety of blades, such as, for example, shaper blades. It is therefore intended that the foregoing detailed description be regarded as illustrative rather than limiting and that it be understood that it is the following claims, including all equivalents, which are intended to define the scope of this invention.